SUBMISSION: DRAYTON SOUTH COAL PROJECT PROPOSAL

Submitted by Beyond Zero Emissions
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20 December 2012

The Director General
The Department of Planning & Infrastructure
GRO Box 39
Sydney, NSW 2001

Dear Sir,

Re: Objection to the Drayton South Coal Project Proposal

I am writing on behalf of the not-for-profit climate change research and education organisation Beyond Zero Emissions to object to the proposed expansion of the Drayton South coal mine. Beyond Zero Emissions conducts research into how Australia can transition to a zero carbon nation within the next decade due to the pressing nature of anthropogenic climate change.

Beyond Zero Emissions recently commissioned a report titled *Health and Social Harms of Coal Mining in Local Communities: Spotlight on the Hunter Region*, released in October 2012. The report was prepared by Ruth Colagiuri, Johanne Cochrane and Seham Girgis of the Health and Sustainability Unit at the University of Sydney. The report examines 50 peer-reviewed studies on the health and social impacts of coal mining and combustion on local communities around the world. It finds that there is clear evidence from the international health literature that living near coal mines or coal power stations causes serious harm to health. This harm ranges from excess deaths to increased rates of birth defects, cancer and heart lung and kidney disease, to increased respiratory ailments. And yet there are no primary studies addressing the health impacts of coal in Australia.

Additionally, Beyond Zero Emissions published a report in July 2012 titled *Laggard to Leader: How Australia Can Lead the World to Zero Carbon Prosperity*. This report shows how Australia can influence the future direction of global efforts to stabilise the climate through curtailing the global supply of traded coal, making clean energy technologies cheaper, and developing a new model of international climate cooperation that promises to be more effective than the protracted UN negotiations. Furthermore, the report demonstrates how such actions serve the national interest – both raising the odds of securing a safe climate and establishing Australia as a leading force in global zero-carbon industries.

These two reports form the basis of Beyond Zero Emissions' objection to the proposed expansion of the Drayton South coal mine. Despite the hugely significant and avoidable health risks and ecological disaster associated with the use of fossil fuels such as coal there are at least 30 new coal mines and coal mine expansions planned for the NSW Hunter Valley region. These plans must not be implemented.

Please find below a two-part argument against expanding the Drayton South mine. The first part outlines the health and social harms that may be caused by coal mining, while the second examines the close links between coal mining and climate change. These two parts combine to make a persuasive case to knock back the Drayton South proposal, based on the well being of local communities, the Australian national community and, ultimately, the global community.

I respectfully ask that you register our objection to the proposed expansion of the Drayton South open cut mine and seriously consider these objections when considering the appropriateness of the proposal.

Sincerely,

Matthew Wright

HEALTH AND SOCIAL HARMS OF COAL MINING

Introduction

The October 2012 report *Health and Social Harms of Coal Mining in Local Communities: Spotlight on the Hunter Region* by researchers from the Health and Sustainability Unit at the University of Sydney draws attention to the negative impacts of coal mining on local communities in Australia. This topic has to date been the subject of little scrutiny in this country, despite the significant evidence produced by international studies connecting coal extraction to various health and community problems. The creators of the report *Health and Social Harms of Coal Mining in Local Communities*, Colaguiri et. al., aim to bring this important topic to bear on Australian political debate and decision-making.

The report examines 50 peer-reviewed studies on the health and social impacts of coal mining and combustion on local communities around the world. It finds that there is clear evidence from the international health literature that living near coal mines or coal power stations causes serious harm to health and communities.

Because of the findings of this report, Beyond Zero Emissions finds the proposal for the expansion of the Drayton South mine unacceptable. Please find a summary of these findings below.

Summary of Key *Health and Social Harms of Coal Mining* Findings

The report is structured around four research questions:

1) What specific diseases or other health problems are associated with coal mining in local communities?
2) Are there clusters of diseases or other health problems in the Hunter region of NSW?
3) Is social injustice associated with coal mining in local communities?
4) Is there an associated between coal mining and social injustice in the Hunter region of NSW?

Below is a summary of the report's answers to these questions, excerpted from pp. iv-v:

Summary of key findings for Research Question 1 – Health harms

Adults in coal mining communities have been found to have:

- Higher rates of mortality from lung cancer, chronic heart, respiratory and kidney diseases
- Higher rates of cardiopulmonary disease, chronic obstructive pulmonary disease (COPD) and other lung diseases, hypertension, kidney disease, heart attack and stroke, and asthma
- Increased probability of a hospitalisation for COPD (by 1% for each 1,462 tons of coal mined), and for hypertension (by 1% for each 1,873 tons of coal mined)
- Poorer self-rated health and reduced quality of life

Children and infants in coal mining communities have been found to have:

- Increased respiratory symptoms including wheeze, cough and absence from school with respiratory symptoms although not all studies reported this effect
- High blood levels of heavy metals such as lead and cadmium
- Higher incidence of neural tube deficits, a high prevalence of any birth defect, and a greater chance of being of low birth weight (a risk factor for future obesity, diabetes and heart disease)

Adults (and whole population) in communities near coal-fired power stations and coal combustion facilities have been found to have:

- Increased risk of death from lung, laryngeal and bladder cancer
- Increased risk of skin cancer (other than melanoma)
- Increased asthma rates and respiratory symptoms

Children, infants, and foetal outcomes in communities near coal-fired power stations and coal combustion facilities have been found to have

- Oxidative deoxyribonucleic acid (DNA) damage
- Higher rates of preterm birth, low birth weight, miscarriages and stillbirths
- Impaired foetal and child growth and neurological development
- Increased asthma rates and respiratory symptoms.

Summary of key findings for Research Question 2 – Disease clusters in the Hunter Region

No specific research studies were found to confirm or refute the existence of mining related disease clusters among residents of the Hunter Region, or their possible causes if they do exist. In the absence of such evidence, we reviewed two reports of routine health monitoring data from the Hunter Region from the NSW Health Department (now known as the NSW Ministry of Health). These reports showed mixed results. For example, the NSW Health Report (2010a) included the whole of the Hunter Region and suggested higher rates of deaths and

illness in some areas for some health problems when compared with the rest of NSW. However, the Bettering the Evaluation and Care of Health (BEACH) general [end p. iv] practice data for Singleton, Muswellbrook and Denman postcodes (NSW Health 2010b) did not demonstrate significantly higher rates of any problems managed, or medications prescribed or supplied, in general practice compared with the rest of non-metropolitan NSW.

Summary of key findings for Research Question 3 – Social injustice (other than in the Hunter Region)

For the purposes of this report, we defined social injustice as: 'the unequal or unfair social distribution of rewards, burdens, and opportunities for optimising life chances and outcomes'. This definition includes unfair imbalances in access to essential natural resources, opportunities for employment, education, political or social power and influence, and social or individual burdens such as financial costs, social or occupational disruption, and environmental damage.

Aside from studies focussing explicitly on the Hunter Region of NSW which are discussed in the next section, six peer reviewed articles were identified from the US, the UK, Russia and (Queensland) Australia that directly addressed social injustices associated with coal mining. While there were limitations to these, a central theme of the impact on local communities was both real and perceived environmental degradation and injustices. We categorised the evidence for social injustice as:

Environmental damage and perceptions of damage and health impacts
- slurry (fly ash) spills
- lack of community awareness of damage
- distress resulting from concerns and uncertainties about the health impacts of mining-related pollution

Water quality and human occupations (activities)
- the impact of water pollution on securing safe water for drinking, producing food, swimming and fishing

Social and economic costs
- the cost of environmental damage to communities and society
- inability of the community to capture economic benefits
- social changes inhibiting the generation of alternative means of economic capital to mining
- socio-demographic changes resulting in labour shortages in other industries; reduced access to and affordability of accommodation; increased road traffic accidents
- increased pressure on local emergency services
- increases in criminal and other anti-social behaviours.

Summary of key findings for Research Question 4 – Social injustice in the Hunter Region

Six peer-reviewed studies were identified on social aspects of mining in the Hunter Region. These studies detail a variety of impacts such as:

- Social distress and environmental injustice including concerns over the cumulative health impacts of mining, social divisions and inequalities, feelings of loss and disempowerment, pollution/poor air quality, environmental damage and the potential to impact negatively on future generations
- Asymmetry of power and influence including access to information, contestation over natural resources, and political conflicts of interest
- Water access and rights including changes to the NSW water grading system favouring the coal mining industry
- Failure to protect – specifically, the failure of government and the mining industry to exercise the precautionary principle and protect local communities from potential or actual harms.

Conclusion

The report *Health and Social Harms of Coal Mining in Local Communities: Spotlight on the Hunter Region* clearly demonstrates the need for more research on the impacts of coal mining in Australia. It draws attention to both the insufficient evidence to judge the medical and social safety of coal on the communities it is close to, as well as the mounting international evidence that coal extraction does indeed cause significant harm to individuals and societies. Given this evidence, it is at best unwise to expand coal mining, including in the case of the Drayton South mine. This will be expanded on in the later section ‘Conclusion and Recommendations’ (p. 12).

COAL MINING AND CLIMATE CHANGE

Introduction

Coal mining is a significant contributor to the build-up of carbon emissions in the earth's atmosphere that is raising global temperatures and changing the earth's climate.

Beyond Zero Emissions published the first part of a plan to make Australia zero carbon within a decade, its 2010 report *Zero Carbon Australia: Stationary Energy Plan*. This report outlines the necessity of drastically cutting greenhouse gas emissions as soon as possible:

> "Current levels of greenhouse gases in the atmosphere are already sufficiently high to carry the climate system past significant tipping points. They pose an unacceptable risk of dangerous and irreversible changes to the world's climate, to biodiversity, and therefore to human civilisation. These changes directly affect Australia's food and water security, and increase the risk of regional instability.
>
> "Using a global carbon budget approach, recent work by the German advisory Council on Global Change demonstrates that, to have a two-in-three chance of keeping global warming to less than 2°C above pre-industrial temperatures, developed nations with the highest per capita rates of emissions, such as the United states and Australia, would need to decarbonise their economies by 2020. There is increasing consensus that the 2°C threshold is too high and beyond a 'safe boundary,' and that atmospheric carbon dioxide must be reduced from the current level of around 390 parts per million (ppm) into the range of 300 to 350 ppm" (p. xvi).

These claims are supported by top climate scientists throughout the world.

Many argue that Australia is only one country among many and thus cannot have a significant impact on global emissions. Beyond Zero Emissions argues that this does not excuse Australia from taking decisive action to reduce emissions as soon as possible in its 2012 report *Laggard to Leader: How Australia Can Lead the World to Zero Carbon Prosperity*. This report details how Australia can become a global leader in the effort to keep climate change to a minimum. One way of doing this, the report argues, is by leaving our coal in the ground instead of expanding such projects as the Drayton South coal mine. This will be explored further below.

Summary of *Laggard to Leader: How Australia Can Lead the World to Zero Carbon Prosperity*

International political will to combat the escalating threat of anthropogenic climate change is at a dangerously low level. Increasingly, national organisations as well as peak international organisations such as the International Energy Agency are warning us that "the door to a 2° trajectory is about to close" (cited in Green and Finighan 2012 p. vi).

As such, the transition to a zero carbon economy is of *immediate* concern, and effects every decision we make *today*, including the decision about the proposed expansion of the Drayton South mine. If all current plans for coal mine establishment and expansion (as well as gas expansion) in Australia are carried out, the nation would be responsible for more than 10% of greenhouse gas emissions globally by 2030, pushing the earth on it's trajectory to 2°C or more of warming.

Laggard to Leader proposes that Australia lead the world in "Cooperative Decarbonisation," whereby each country will "phase down to zero or very near zero the greenhouse gas emissions associated with every economic and social process over which it has control or influence" (p. vi). This includes not only direct emissions, but emissions associated with exports and imports, such as Australia's coal.

Laggard to Leader demonstrates one path toward a prosperous zero carbon Australia. Australia can be a forerunner in the global fossil fuel phase-out by placing a moratorium on new fossil fuel developments. This would place a strain on the global demand for fossil fuels and thus force world leaders into action. Australia would then lead the way in large-scale development of the wind and solar technologies that are so well suited to its environmental conditions.

Decarbonisation is in Australia's interests not only because of the devastating effect continued warming will have, but also because it would position Australia as a world leader in zero carbon alternatives:

> "The technologies, products, processes, services, skills, knowledge and experience developed by Australian companies, researchers and governments in the process of decarbonising Australia's $1.5 trillion economy will be extremely valuable in a world crying out for zero carbon solutions. Australia should aim to become the world's go-to country for zero-carbon products, zero-carbon services, zero-carbon finance and zero-carbon systems planning. The global benefit, in terms of facilitating emissions reductions overseas, of Australia's zero carbon ingenuity and experience would be considerable. And the benefit to Australia of capturing what HSBC is forecasting to be a multi-trillion dollar market by 2020 would be enormous" (p. 50).

Conclusion

The report *Laggard to Leader: How Australia Can Lead the World to Zero Carbon Prosperity* shows that it is both necessary and eminently possible for Australia to decarbonise in the near future. Australia will flourish economically on the world stage by leading a global zero carbon movement. The threat of climate change leaves no room for the expansion of the fossil fuel industry, including such seemingly insignificant decisions such as the expansion of the Drayton South coal mine.

CONCLUSION AND RECOMMENDATION

This submission opposes the proposed expansion of the Drayton South Coal Project on the grounds of the significant risks it poses to local communities, the Australian community and the global community. This submission has focussed on these risks in relation two major areas:

1) The health and social harms of coal mining; and
2) The relationship between coal mining and climate change.

Health and social harms of coal mining

- It has been demonstrated that coal mining is associated with health and social harms.
- Health issues range from excess deaths to increased rates of birth defects, cancer and heart lung and kidney disease, to increased respiratory ailments.
- Social issues centre on the community economic, social and psychological costs of poor individual and environmental health, as well as the political and economic disempowerment suffered by local communities as they are subjected to the negative aspects of the mines while receiving little to no benefit from them.
- There has not to date been sufficient research into the above impacts in Australia to make the expansion of the Drayton South mine worth the risks it may pose to local residents of the Hunter Valley region.

Coal mining and climate change

- Coal mining is a significant contributor to the impending threat of climate change.
- Proposed expansions of the fossil fuel industry in Australia would make that the nation responsible for more than 10% of greenhouse gas emissions globally by 2030, pushing the earth on it’s trajectory to a dangerous 2°C or more of warming.

- Australia can be a world leader in combating climate change through "Cooperative Decarbonisation" by instituting a moratorium on fossil fuels and instead building renewable energy infrastructure.
- This would benefit the nation economically by positioning it as a global go-to country for zero-carbon products, zero-carbon services, zero-carbon finance and zero-carbon systems planning.

Recommendation

It is the recommendation of this submission that the Drayton South coal mine must not be expanded in order to preserve the health and prosperity of the Hunter Valley region, the Australian nation and the world.

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Colaguiri R, Cochrane J, Girgis S. *Health and Social Harms of Coal Mining in Local Communities: Spotlight on the Hunter Region*. Beyond Zero Emissions, Melbourne, October 2012. Available online at < http://beyondzeroemissions.org/blog/coal-health-report-121023>.

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ABOUT BEYOND ZERO EMISSIONS

Climate solutions, education and action

Beyond Zero Emissions Inc. is a not-for-profit research and education organisation developing blueprints for the implementation of climate change solutions. Our goal is to transform Australia from a 19th century fossil fuel based economy to a 21st century renewable powered clean tech economy. Through the Zero Carbon Australia research project BZE is encouraging climate change policy that is in line with the science. By sharing this research with thousands of Australians via the Repower Australia talks program, BZE is engaging, educating and inspiring the community with real and positive solutions to climate change.

In partnership with the University of Melbourne Energy Research Institute we are undertaking the award-winning Zero Carbon Australia 2020 Project, which is putting together fully costed transition plans for getting Australia to zero emissions in ten years using commercially available technology. The ZCA project covers the 6 sectors of energy, buildings, transport, land use, industrial processes and coal exports.

We are involved in the following activities:

- research
- education
- transition planning
- corporate education
- network building
- solutions development

We accept the findings of the most current science, which shows that we have already allowed climate change to go too far, and must act immediately to reduce our levels of greenhouse gas emissions to zero and below.

For further information, please visit our website, www.beyondzeroemissions.org.